



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2010-1206; Directorate Identifier 2009-NM-216-AD; Amendment 39-16868; AD 2011-24-04]

RIN 2120-AA64

Airworthiness Directives; McDonnell Douglas Corporation Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for certain Model DC-10-10, DC-10-10F, and MD-10-10F airplanes. This AD was prompted by reports of three instances of fuel leaks in the lower cap splice of the wing rear spar at station Xors=409. Investigation revealed the fuel leak was due to a crack in the lower cap. If not corrected, this condition could result in fuel leaks or cracking of the lower wing skin and structure, causing possible inability of the structure to sustain the limit load and adversely affecting the structural integrity of the airplane. This AD requires repetitive inspections for cracking on the lower cap of the rear spar of the left and right wings between stations Xors=417 and the outboard edge of the lower cap splice of the wing rear spar at station Xors=400; temporary and permanent repairs if necessary; and repetitive inspections of repaired areas, and corrective actions if necessary. We are issuing this AD to correct the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, 3855 Lakewood Boulevard, MC D800-0019, Long Beach, California 90846-0001; telephone 206-544-5000, extension 2; fax 206-766-5683; e-mail dse.boecom@boeing.com; Internet <https://www.myboeingfleet.com>. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is Document Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Nenita Odesa, Aerospace Engineer, Airframe Branch, ANM-120L, FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712-4137; phone: 562-627-5234; fax: 562-627-5210; e-mail: nenita.odesa@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to the specified products. That NPRM was published in the Federal Register on December 30, 2010 (75 FR 82333). That NPRM proposed to require repetitive inspections for cracking on the lower cap of the rear spar of the left and

right wings between stations Xors=417 and the outboard edge of the lower cap splice of the wing rear spar at station Xors=400; temporary and permanent repairs if necessary; and repetitive inspections of repaired areas, and corrective actions if necessary.

Comments

We gave the public the opportunity to participate in developing this AD. We received no comments on the NPRM (75 FR 82333, December 30, 2010) or on the determination of the cost to the public.

New Service Information

Since publication of the NPRM (75 FR 82333, December 30, 2010), Boeing has issued Alert Service Bulletin DC10-57A156, Revision 2, dated August 23, 2011. We have updated the references in paragraphs (c) and (g) of this AD to include Boeing Alert Service Bulletin DC10-57A156, Revision 2, dated August 23, 2011. The changes in this revised service bulletin are for clarification only. However, certain inspections called eddy current test high frequency (ETHF) inspections in Boeing Alert Service Bulletin DC10-57A156, Revision 1, dated March 10, 2010 (which was referenced in the NPRM (75 FR 82333, December 30, 2010) as the appropriate source of service information for certain actions), are called high frequency eddy current inspections in Boeing Alert Service Bulletin DC10-57A156, Revision 2, dated August 23, 2011. This is different terminology for the same inspection method. We have followed the terminology in Boeing Alert Service Bulletin DC10-57A156, Revision 2, dated August 23, 2011, and used both terminologies as specified in Boeing Alert Service Bulletin DC10-57A156, Revision 2, dated August 23, 2011. We are also allowing credit for actions done before the effective date of this AD, in accordance with Boeing Alert Service Bulletin DC10-57A156, Revision 1, dated March 10, 2010, and have added that reference to paragraph (h) of this AD.

Since publication of the NPRM (75 FR 82333, December 30, 2010), Boeing has also issued revised service rework drawings to clarify the repair instructions. These service rework drawings do not provide repairs for all conditions specified in the NPRM (75 FR 82333, December 30, 2010). We have updated the references in paragraph (g) of this AD to include Boeing DC-10-10 Service Rework Drawing SR10570019, Revision K, dated April 17, 2009, including Parts List PL SR10570019, Revision K, dated April 23, 2009, including Boeing Engineering Order, Revision L, dated April 14, 2010; and Boeing DC-10-10 Service Rework Drawing SR10570048, Revision K, dated October 7, 2010, including Parts List PL SR10570048, Revision K, dated October 14, 2010. We have also revised the actions in paragraph (g) of this AD to specify which conditions are addressed by these service rework drawings, and which conditions need a repair method approved by the FAA.

Conclusion

We reviewed the relevant data and determined that air safety and the public interest require adopting the AD as proposed with the changes described previously—except for minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM (75 FR 82333, December 30, 2010), for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

Costs of Compliance

We estimate that this AD affects 68 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection	2 work-hours X \$85 per hour = \$170 per inspection cycle	\$0	\$170 per inspection cycle	\$11,560 per inspection cycle

We have received no definitive data that would enable us to provide a cost estimate for the on-condition actions specified in this AD.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

(1) Is not a "significant regulatory action" under Executive Order 12866,

(2) Is not a “significant rule” under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),

(3) Will not affect intrastate aviation in Alaska, and

(4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

2011-24-04 McDonnell Douglas Corporation: Amendment 39-16868; Docket No. FAA-2010-1206; Directorate Identifier 2009-NM-216-AD.

(a) Effective Date

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to McDonnell Douglas Corporation Model DC-10-10, DC-10-10F, and MD-10-10F airplanes; certificated in any category; as identified in Boeing Alert Service Bulletin DC10-57A156, Revision 2, dated August 23, 2011.

(d) Subject

Air Transport Association (ATA) of America Code 57: Wings.

(e) Unsafe Condition

This AD results from reports of three instances of fuel leaks in the lower cap splice of the wing rear spar at station Xors=409. The Federal Aviation Administration is issuing this AD to detect and correct cracking on the lower cap of the rear spar of the left and right wings between stations Xors=417 and the outboard edge of the lower cap splice of the wing rear spar at station Xors=400, which could result in fuel leaks or cracking of the lower wing skin and structure, causing possible inability of the structure to sustain the limit load and adversely affecting the structural integrity of the airplane.

(f) Compliance

You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

(g) Inspection

Within 1,750 flight cycles after the effective date of this AD, do an eddy current test high frequency (ETHF) inspection for cracking on the lower cap of the rear spar of the left and right wings between stations Xors=417 and the outboard edge of the lower cap splice of the wing rear spar at station Xors=400, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin DC10-57A156, Revision 2, dated August 23, 2011.

(1) If no cracking is found, repeat the inspection required by paragraph (g) of this AD thereafter at intervals not to exceed 1,750 flight cycles.

(2) If any cracking is found in the spar cap aft leg at the fastener holes, and that cracking can be removed by hole enlargement, before further flight, do a permanent repair, in accordance with Boeing DC-10-10 Service Rework Drawing SR10570048, Revision K, dated October 7, 2010, including Parts List PL SR10570048, Revision K, dated October 14, 2010. Within 1,750 flight cycles after doing the applicable permanent repair, and thereafter at intervals not to exceed 1,750 flight cycles, do ETHF and high frequency eddy current inspections for cracking in accordance with Boeing DC-10-10 Service Rework Drawing SR10570048, Revision K, dated October 7, 2010, including Parts List PL SR10570048, Revision K, dated October 14, 2010. If any cracking is found during any inspection required by this paragraph, before further flight, repair the cracking, in accordance with the procedures specified in paragraph (i) of this AD.

(3) If any cracking is found in the spar cap aft leg at the fastener holes, and that cracking cannot be removed by hole enlargement but it does not extend into the vertical leg, before further flight, do the applicable actions specified in paragraph (g)(3)(i) or (g)(3)(ii) of this AD:

(i) If cracking is found between Station Xors=400 and inboard of Station Xors=408, repair the cracking, in accordance with the procedures specified in paragraph (i) of this AD (Alternative Method of Compliance (AMOCs) paragraph).

(ii) If cracking is found between Stations Xors=408 and Xors=417, do a permanent repair, in accordance with Boeing DC-10-10 Service Rework Drawing SR10570048, Revision K, dated October 7, 2010, including Parts List PL SR10570048, Revision K, dated October 14, 2010. Within 4,550 flight cycles after doing a permanent repair, and thereafter at intervals not to exceed 4,550 flight cycles, do ETHF and ultrasonic inspections for cracking, in accordance with Boeing DC-10-10 Service Rework Drawing SR10570048, Revision K, dated October 7, 2010, including Parts List PL

SR10570048, Revision K, dated October 14, 2010. If any cracking is found during any inspection required by this paragraph, before further flight, repair the cracking, in accordance with the procedures specified in paragraph (i) of this AD.

(4) If any cracking is found in the spar cap aft leg at fastener holes and that cracking extends into the vertical leg of the spar cap, do the actions specified in paragraph (g)(4)(i) or (g)(4)(ii) of this AD.

(i) If any cracking is found between Station Xors=400 and inboard of Station Xors=408, before further flight, do the applicable permanent repair, in accordance with Boeing DC-10-10 Service Rework Drawing SR10570019, Revision K, dated April 17, 2009, including Parts List PL SR10570019, Revision K, dated April 23, 2009, including Boeing Engineering Order, Revision L, dated April 14, 2010. Within 4,550 flight cycles after doing the permanent repair, and thereafter at intervals not to exceed 4,550 flight cycles, do ETHF and ultrasonic inspections for cracking of the repaired area, in accordance with Boeing DC-10-10 Service Rework Drawing SR10570019, Revision K, dated April 17, 2009, including Parts List PL SR10570019, Revision K, dated April 23, 2009, including Boeing Engineering Order, Revision L, dated April 14, 2010. If any cracking is found during any inspection required by this paragraph, before further flight, repair the cracking, in accordance with the procedures specified in paragraph (i) of this AD.

(ii) If any cracking is found between Stations Xors=408 and Xors=417, do the actions in paragraphs (g)(4)(ii)(A) or (g)(4)(ii)(B) of this AD.

(A) Do the actions in paragraphs (g)(4)(ii)(A)(1) and (g)(4)(ii)(A)(2) of this AD.

(1) Before further flight, do a temporary repair, in accordance with Boeing DC-10-10 Service Rework Drawing SR10570048, Revision K, dated October 7, 2010, including Parts List PL SR10570048, Revision K, dated October 14, 2010. Within 1,650 flight cycles after doing the temporary repair; and thereafter at intervals not to exceed

1,650 flight cycles, do ETHF and ultrasonic inspections for cracking of the repaired area, in accordance with Boeing DC-10-10 Service Rework Drawing SR10570048, Revision K, dated October 7, 2010, including Parts List PL SR10570048, Revision K, dated October 14, 2010, until the permanent repair required by paragraph (g)(4)(ii)(A)(2) of this AD is done. If any cracking is found during any inspection required by this paragraph, before further flight, repair the cracking, in accordance with the procedures specified in paragraph (i) of this AD.

(2) Within 7,000 flight cycles after the temporary repair has been done, do the applicable permanent repair, in accordance with Boeing DC-10-10 Service Rework Drawing SR10570019, Revision K, dated April 17, 2009, including Parts List PL SR10570019, Revision K, dated April 23, 2009, including Boeing Engineering Order, Revision L, dated April 14, 2010. Within 4,550 flight cycles after doing the permanent repair, and thereafter at intervals not to exceed 4,550 flight cycles, do ETHF and ultrasonic inspections for cracking of the repaired area, in accordance with Boeing DC-10-10 Service Rework Drawing SR10570019, Revision K, dated April 17, 2009, including Parts List PL SR10570019, Revision K, dated April 23, 2009, including Boeing Engineering Order, Revision L, dated April 14, 2010. If any cracking is found during any inspection required by this paragraph, before further flight, repair the cracking, in accordance with the procedures specified in paragraph (i) of this AD.

(B) Before further flight do the applicable permanent repair, in accordance with Boeing DC-10-10 Service Rework Drawing SR10570019, Revision K, dated April 17, 2009, including Parts List PL SR10570019, Revision K, dated April 23, 2009, including Boeing Engineering Order, Revision L, dated April 14, 2010. Within 4,550 flight cycles after doing the permanent repair, and thereafter at intervals not to exceed 4,550 flight cycles, do ETHF and ultrasonic inspections for cracking of the repaired area, in accordance with Boeing DC-10-10 Service Rework Drawing SR10570019, Revision K,

dated April 17, 2009, including Parts List PL SR10570019, Revision K, dated April 23, 2009, including Boeing Engineering Order, Revision L, dated April 14, 2010. If any cracking is found during any inspection required by this paragraph, before further flight, repair the cracking, in accordance with the procedures specified in paragraph (i) of this AD.

(h) Credit for Actions Accomplished in Accordance with Previous Service Information

Actions accomplished before the effective date of this AD according to Boeing Alert Service Bulletin DC10-57A156, dated September 16, 2009; and Revision 1, dated March 10, 2010; are considered acceptable for compliance with the corresponding actions specified in this AD.

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Los Angeles Aircraft Certification Office, (ACO) FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to ATTN: Nenita Odesa, Aerospace Engineer, Airframe Branch, ANM-120L, FAA, Los Angeles ACO, 3960 Paramount Boulevard, Lakewood, California 90712-4137; phone: (562) 627-5234; fax: (562) 627-5210; e-mail: nenita.odessa@faa.gov.

(2) To request a different method of compliance or a different compliance time for this AD, follow the procedures in 14 CFR 39.19. Before using any approved AMOC on any airplane to which the AMOC applies, notify your principal maintenance inspector (PMI) or principal avionics inspector (PAI), as appropriate, or lacking a principal inspector, your local Flight Standards District Office. The AMOC approval letter must specifically reference this AD.

(3) An AMOC that provides an acceptable level of safety may be used for any repair required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager,

Los Angeles ACO to make those findings. For a repair method to be approved, the repair must meet the certification basis of the airplane and 14 CFR 25.571, Amendment 45, and the approval must specifically refer to this AD.

(j) Related Information

For more information about this AD, contact Nenita Odesa, Aerospace Engineer, Airframe Branch, ANM-120L, FAA, Los Angeles ACO, 3960 Paramount Boulevard, Lakewood, California 90712-4137; phone: (562) 627-5234; fax: (562) 627-5210; e-mail: nenita.odessa@faa.gov.

(k) Material Incorporated by Reference

You must use the following service information to do the actions required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference (IBR) under 5 U.S.C. 552(a) and 1 CFR part 51 of the following service information on the date specified:

(1) Boeing Alert Service Bulletin DC10-57A156, Revision 2, dated August 23, 2011; IBR approved [INSERT DATE 35 DAYS AFTER PUBLICATION].

(2) Boeing DC-10-10 Service Rework Drawing SR10570019, Revision K, dated April 17, 2009, including Parts List PL SR10570019, Revision K, dated April 23, 2009, including Boeing Engineering Order, Revision L, dated April 14, 2010; IBR approved [INSERT DATE 35 DAYS AFTER PUBLICATION]. Only Sheet 1 of this drawing indicates the revision date of this document.

(3) Boeing DC-10-10 Service Rework Drawing SR10570048, Revision K, dated October 7, 2010, including Parts List PL SR10570048, Revision K, dated October 14, 2010; IBR approved [INSERT DATE 35 DAYS AFTER PUBLICATION]. Only Sheet 1 of this drawing indicates the revision date for this document.

(4) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, 3855 Lakewood Boulevard, MC

D800-0019, Long Beach, California 90846-0001; telephone 206-544-5000, extension 2; fax 206-766-5683; e-mail dse.boecom@boeing.com; Internet <https://www.myboeingfleet.com>.

(5) You may review copies of the service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue S.W., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

(6) You may also review copies of the service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at an NARA facility, call 202-741-6030, or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

Issued in Renton, Washington, on November 7, 2011.

Kalene C. Yanamura,
Acting Manager,
Transport Airplane Directorate,
Aircraft Certification Service.

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